

Monterey Bay Aquarium Research Institute, and the South Dakota School of Mines and Technology are just a few of the various other organizations that have a vested interest in methane hydrate research.

I also want to make particular mention of the work that is being done at the University of Hawaii and again recognize Senator AKAKA for his efforts in advancing similar legislation in the Senate.

Mr. Speaker, H.R. 1753 presents a thoughtful and common sense approach to expanding future energy choices. Through continued pursuit of progress in science and technology, we can assist in providing future generations with an abundant supply of a clean and reasonably priced energy source.

I urge my colleagues to support the Gas Hydrate Research and Development Act, and I thank my chairman, the gentleman from Wisconsin (Mr. SENSENBRENNER), for his support and his help.

Mr. Speaker, I submit the statement of Senator AKAKA in support of H.R. 1753 for the RECORD.

REMARKS OF SENATOR DANIEL K. AKAKA
REGARDING METHANE HYDRATE LEGISLATION

I believe that H.R. 1753, and the Senate counterpart bill, S. 330, are important energy research bills that Congress should enact this session. Methane hydrate research has strong, bipartisan support. Senators Lott, Graham, Craig and Landrieu have cosponsored S. 330.

The discovery of methane hydrates presents a research and development opportunity with major energy security implications. The bill will serve the long-term goal of developing new energy supplies as well as the near-term goal of increased safety and recovery of conventional oil and gas.

Significant, widespread deposits of gas hydrates have been detected, but have not been characterized, all over the globe. The data on this resource may surprise you.

Worldwide, the amount of methane trapped in gas hydrate form is estimated to be 10,000 gigatons—twice the carbon found in all other fossil fuels and 3,000 times the amount of methane present in the atmosphere. Scientists at the U.S. Geological Survey estimate that 320,000 trillion cubic feet of natural gas exists in methane hydrate form in the U.S.—a staggering resource.

In the United States, on-shore deposits are found in the arctic regions of Alaska. However, deep sea methane hydrate deposits are the most abundant source of methane, occurring at depths greater than 300 meters. Marine geologists have identified large deposits off the coasts of Alaska, Louisiana, Texas, New Jersey, Oregon and North and South Carolina.

Research is needed to determine whether we can produce natural gas from these vast reserves. Natural gas from methane hydrates will never be realized unless we undertake a serious research and development program outlined in these bills.

The U.S. currently lags other countries in exploring this exciting new energy source. Japan and India have launched aggressive R&D programs to explore methane hydrates. Some believe that Japanese commercial production is only a decade away. Clearly we are falling behind in our efforts to understand this energy source. In the face of dwindling energy resources and increased reliance on energy imports, we can hardly afford to miss this important opportunity.

In addition to potential use as an energy source, methane hydrate deposits also represent a challenge to conventional oil and gas extraction. Hydrates influence physical properties of ocean sediments, particularly strength and stability. Characterizing hydrate formation and breakdown is important for the safety of deep offshore drilling and other deep sea operations.

Given these research, technology, and energy security considerations, it would be shortsighted not to invest in our future by assessing and developing gas hydrates. I urge you to pass H.R. 1753.

Ms. JACKSON-LEE of Texas. Mr. Speaker, I support H.R. 1753, the Methane Hydrate Research and Development Act of 1999. This measure will promote the research, identification, assessment, exploration, and development of methane hydrate resources.

As a Member of the House Science Committee, I recognize the importance of our natural resources. And as a Houstonian and Texan, I have a vested interest in natural and fossil fuels.

Natural gas is an important source of clean efficient energy. Today, natural gas comes primarily from geological formations in which methane molecules—the primary component of natural gas—exist in the form of gas.

Methane also exists in ice-like formations called hydrates. Hydrates trap methane molecules inside a cage of frozen water. Hydrates are found on or under seabeds and under permafrost.

The amount of methane trapped in hydrates is largely unknown, but it is very large. A number of scientists believe that hydrates contain more than twice as much energy as all the world's coal, oil, and natural gas combined.

Currently, we do not know how to produce a meaningful amount of energy from hydrates. Scientists around the world are trying to discover cost effective production methods. They are also trying to assess the size of the resource base, to explore problems hydrates cause during the production of offshore natural gas, and to explore additional uses for hydrates.

If scientists can find a way to safely extract the gas, they will have tapped an enormous new clean-burning energy supply. This act direct the Secretary of Energy to commence a gas hydrate research and development program. In conjunction with the Secretaries of Defense and the Interior, along with the Director of the NSF, the Secretary of Energy is to commence this research. This measure will allow the Secretary to award grants or contracts or even enter into cooperative agreements with institutions of higher education and industrial enterprises to conduct basic and applied research, to identify, explore, assess, and develop gas hydrate as a source of energy.

Mr. Speaker, it is vital that we continue to search for new sources of energy that will reduce our dependence on foreign sources, further protecting our energy security, and that will protect the environment from further harm.

Mr. MASCARA. Mr. Speaker, in an era of increasingly volatile energy prices and dwindling energy resources, it is imperative that the U.S. fund research for alternative energy sources now so that we are not left out in the cold when the cost of or inaccessibility to traditional fossil fuels makes heating our homes and fueling our factories impossible. H.R. 1753, the Methane Hydrate Research and De-

velopment Act of 1999, attempts to stave off that threat by directing the Secretary of Energy to coordinate a research and development program with the Secretaries of Defense, Interior and the Director of the National Science Foundation to develop methane hydrate resources.

Methane hydrate, a frozen mixture of methane and water, is found in sea sediments of the outer continental regions under unstable, high pressure conditions and in arctic regions where permafrost conditions exist. Methane hydrate, once safely extracted from these regions promises to become a viable source of alternative energy. The most promising area of research seems to be in harvesting methane hydrates from the outer continental regions. A 1997 U.S. Geological Survey appraisal of natural gas hydrate resources in the U.S. estimated that about 200,000 trillion cubic feet exist. It has been estimated that one 50 by 150 kilometer area off the coast of North and South Carolina could supply the energy needs of the United States for over 70 years.

Unfortunately these estimates do us no good without investments to develop the technology to safely and economically harvest methane hydrates. Passage of H.R. 1753 is a crucial first step to developing economical and ecologically sensitive technology that allows the United States to meet our energy needs in the 21st century. I support passage of H.R. 1753 and urge my colleagues to support passage of this important legislation.

Mr. DOYLE. Mr. Speaker, I have no further requests for time, and I yield back the balance of my time.

Mr. SENSENBRENNER. Mr. Speaker, I have no further requests for time, and I yield back the balance of my time.

The SPEAKER pro tempore (Mr. BONILLA). The question is on the motion offered by the gentleman from Wisconsin (Mr. SENSENBRENNER) that the House suspend the rules and pass the bill, H.R. 1753, as amended.

The question was taken; and (two-thirds having voted in favor thereof) the rules were suspended and the bill, as amended, was passed.

The title of the bill was amended so as to read: "A bill to promote the research, identification, assessment, exploration, and development of gas hydrate resources, and for other purposes."

A motion to reconsider was laid on the table.

MESSAGE FROM THE PRESIDENT

A message in writing from the President of the United States was communicated to the House by Mr. Sherman Williams, one of his secretaries.

FURTHER MESSAGE FROM THE
SENATE

A further message from the Senate by Mr. Lundregan, one of its clerks, announced that pursuant to Public Law 100-696, the Chair, on behalf of the Democratic Leader, announces the appointment of the Senator from California (Mrs. FEINSTEIN) as a member of the United States Capitol Preservation